

# **Food Service Managers Home Study Booklet**



## **Environmental Health and Protection**

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## I) **Introduction**

This study booklet and the accompanying certification course are designed to give food service workers a basic understanding of food safety and instruct these individuals regarding safe **hygienic practices** while handling food. This booklet is designed not only to educate, but also to assist facilities to perform favorably on their health inspection. Save this guide...refer to it...use it as a teaching aide for all food service workers in the food service industry. Thank you and good luck.

### **Role of the Louisville Metro Department of Public Health and Wellness (Health Department)**

People expect safe food. Your responsibility as a food handler is to provide the public with high quality food that has been prepared and cooked in a safe manner. Safe, sanitary food is required by federal, state and local regulations. The Health

Department's role is to protect the public's health. This can only happen when health officials and the food service facilities, in our community, work together to provide safe food. Some of the Health Department's responsibilities include:

1. Educate food service workers
2. Check food supply: source and protection
3. Prevent the spread of disease through education and enforcement of proper hygienic practices
4. Monitor the cleanliness of permitted facility
5. Confirm proper handling, storage and disposal of waste products
6. Verify proper pest control (rats, mice, vermin, insects)
7. Review and approve plans submitted for construction, renovation or alteration of food service establishments
8. Enforce requirements for toilet and hand washing facilities

The Health Department is happy to consult with facilities regarding proper food handling, food service equipment, employee training or any other issue your facility might encounter.

## **II) Illness Causing Organisms**

**Bacteria**- Bacteria are living organisms composed of a single cell. Bacteria may cause two types of **foodborne illness**:

1. Intoxication: Some bacteria may produce a toxic waste, which is harmful to humans. Toxin production occurs when bacteria are allowed to grow to high numbers. Many of these toxins can survive the cooking and freezing process even though the bacteria have been killed.
2. Infection: Some bacteria are harmful and cause illness when consumed. They use food as a medium for growth and for transportation to the human body. These bacteria grow very rapidly in a warm, moist environment.

Bacteria have minimal requirements for growth; these include food, water and proper temperature. Bacteria cannot absorb food in solid form; they need it in a water solution. Don't provide it! That is why dry foods are safer.

Bacteria can survive in a broad range of temperatures, but optimal growth occurs between 41°F to 135°F. The longer bacteria spend in this temperature range, the faster they multiply. Bacteria reproduce by doubling, which means one cell becomes two cells, two cells become four cells and so on. For example, after eight hours, you could have seventeen million bacteria in a food product. The rate of growth for bacteria is slowed at very high and very low temperatures and extremely slowed at freezing temperatures.

Bacteria can be found on food products, human body parts (hands, nose, pimples, burns, boils and cuts) and on equipment (i.e. cutting boards, slicers and can openers). Bacteria are even found on food service worker's aprons and the wiping cloths used to clean **food contact surfaces**.

**Viruses-** Viruses are the simplest and smallest forms of life. Viruses require a living host in order to reproduce and may vary in their reaction to cold and heat. Some viruses

survive temperatures as high as 176°F, while others remain active after a year in cold storage.

**Fungi and Molds-** Fungi and molds range in size from a single cell to giant mushrooms. Most common are molds and yeasts. Molds grow under almost any condition and have the ability to produce mold toxins that may cause illness. Molds give off a musty odor and flavor to foods. Yeasts spoil food, but they also provide us with some favorite foods such as bread. Signs of yeast spoilage may include pink discoloration, sliminess, or an alcohol smell. Foods spoiled by yeasts should be thrown out. Heating food to their proper temperature can kill yeasts.

### **III) FOODBORNE ILLNESS AND CONTAMINATION**

Foodborne illness happens when a person becomes ill from eating food that contains a biological, chemical, or physical hazard. Food can become contaminated at any point as it moves through the food chain. Food must be handled properly during purchasing, storage, preparation and service. Even if there is no contamination during production, processing or distribution of the food, it can still be contaminated when it gets to the food service worker.

In the United States, the Centers for Disease Control estimates that about 76 million Americans become sick and up to 5,000 people die each year from unsafe food. Following the food safety practices in this study booklet can help you prevent the most common causes of foodborne illness and keep your customers happy and healthy.

Foodborne illness, also known as food poisoning, is caused by eating food or drinking beverages contaminated with bacterial waste products or viruses. Harmful chemicals can also cause foodborne illnesses if they have contaminated food during harvesting, processing and/or preparing. Improper handling or the lack of refrigeration actually causes many outbreaks of foodborne illness. High protein food, such as

poultry, beef, cooked rice, dairy products and pork are most frequently involved in foodborne illness. However, the 1989 Hepatitis A epidemic in Louisville showed that even produce could be dangerous. This epidemic was one of the first of its type ever documented. A heavily contaminated shipment of lettuce (and possibly tomatoes) was delivered to many produce vendors. They in turn delivered the produce to nearly 400 restaurants. Clearly, traditional methods of washing produce were not adequate. Three people associated with the epidemic died and hundreds became ill (various lawsuits resulted from the epidemic). Therefore, it is very important that produce be washed to remove contaminants before preparation under continuously running and draining lukewarm water.

A foodborne illness outbreak is defined as an incidence of illness that involves two or more persons who have eaten a common food. Two people can share a common meal, yet only one may become ill. This can be due to the different ages of persons sharing a meal and/or an individual's health status.

**Potentially hazardous/time and temperature controlled for safety food (PHF/TCS)** are required to be kept hot or cold to prevent the growth of bacteria. PHF/TCS food consists in whole or in part of the following: milk or dairy products, egg or egg products, meat or meat products, poultry or poultry products, fish or fish products, shellfish or shellfish products, cooked rice, plant food that is heat-treated or any other ingredient in a form capable of supporting rapid and progressive growth of bacterial pathogens.

**Examples of bacteria that can cause an intoxication to occur:**

**Escherichia Coli- (E. Coli) O157:H7-** Onset of symptoms is 3 to 8 days. Symptoms include bloody diarrhea and abdominal cramps. Found in human and cattle feces (can grow at refrigeration temperatures). Common foods that can

be infected include meats, cheeses, unpasteurized milks, cider, juices and manure-fertilized fruits and vegetables.

**Staphylococcal (Staph)** - Onset of symptoms is 1-12 hours after eating the toxin. Symptoms include diarrhea, abdominal pain, nausea and vomiting (fever is rare). Staph may be present on food, or infected persons may contaminate food they prepare. Forty to fifty percent of healthy people carry staph and can transmit it to food.

**Clostridium Perfringens-** Onset of symptoms is 8-22 hours (usually 10-12 hours). Symptoms can include abdominal pain that is usually followed by diarrhea. Clostridium Perfringens is present in the intestines of humans and animals and can therefore be present in the soil through feces. Leftovers, usually insufficiently cooked or allowed to cool improperly are usually the cause for this illness.

**Bacillus Cereus-** Onset of symptoms is 8-16 hours after ingesting the food. Symptoms include abdominal pain and diarrhea. This type of foodborne illness is often associated with food left at room temperature after cooking such as cooked rice or in dry mix items in which the water has been added; soups, gravy and potatoes.

**Botulism-** Onset of symptoms is 12-36 hours. Symptoms include abdominal pain, headache, fever, diarrhea and vomiting. Usually found in improperly canned food (it has been found in leftover food that was kept in a skillet, repeatedly heated and cooled). The death rate is approximately 15%. Destroy or return bulging cans. **Do not** “taste test” canned foods which has an off odor or that came from a bulging can.

### **Examples of bacteria and viruses that cause an infection:**

**Norovirus (Norwalk Virus)** - Onset of symptoms is 12-60 hours. Symptoms include nausea, vomiting (more



prevalent in children), abdominal cramping, diarrhea (more prevalent in adults), fever and some headache. Highly contagious! Sources of this microorganism include shellfish, food contaminated with feces and **ready-to-eat foods (RTE)** such as sandwiches, salads, ice, cookies and fruits touched by an infected food worker. This virus is commonly known as the stomach flu.

**Salmonella-** Onset of symptoms is normally 3-72 hours (usually 12-36 hours). Symptoms include abdominal pain, headache, nausea, vomiting, fever and diarrhea. It is often found in poultry or meat and meat products; but may also be found in salads, egg custards and other food items which contain protein. Salmonella has also been found inside whole, uncracked eggs. Therefore the Health Department recommends that raw uncooked eggs not be served (it is safer to use eggs for cooking and baking, or to use pasteurized egg products).

**Shigella-** Onset of symptoms is 1-7 days; however, the victim can be ill indefinitely depending on treatment. Symptoms include diarrhea, fever, cramps, chills, sleepiness and dehydration. This microorganism is found in food or water contaminated by human waste (feces). Ready-to-eat foods (RTE) touched by infected food service workers are usually the reason for this foodborne illness.

**Hepatitis A-** Onset of symptoms: A person infected with Hepatitis A may not experience symptoms for up to 30 days! This virus is passed by infected persons who do not properly wash their hands, (especially after using the bathroom) and may be on various food products, including produce. It is very tough and can survive on a dry surface for up to 30 days. It can also survive a 15-minute bath in a 40 parts per million bleach solution. However, proper hand washing will wash the virus off. Carefully rinsing produce before preparation, under continuously running lukewarm water for several minutes will help remove the virus (a produce spinner also may help in removing the virus).

## **IV) Non-biological Hazards**

### **Chemical Hazards**

Chemical hazards are toxic substances that can cause foodborne illness if the chemical gets in the food. Pesticides, additives, preservatives, poisonous metals and cleaning agents are all chemical hazards. All poisonous and toxic materials must be stored in a chemical storage area with all items properly labeled. Chemical storage facilities cannot be used for any other purpose. To prevent potential contamination, poisonous or toxic materials shall not be stored above or with food, food equipment, utensils, or single-service articles.

### **Physical Hazards**

Physical hazards are objects that should not be found in food because they may cause injury or illness if ingested. Choking and/or lacerations can occur from these unintentional items in the food. Broken glass from a damaged light bulb or metal shavings from a worn out can opener are examples of physical hazards.

## **V) Food Safety Guidelines**

### **Purchasing and receiving safe food**

The purchasing of food and proper receiving practices are a very important part of a facilities operation. This is the initial point the food enters the facility. Proper procedures need to be in place to ensure the food is safe from the distributor before processing begins.

- Always purchase food from an approved source.

- Check food upon receipt.
- Inspect raw food and packaged food for damage and pest infestation when delivered to your facility.
- Check frozen food for signs of thawing and refreezing (ice crystals are a sign of thawing and refreezing).
- Check temperatures as soon as possible if frozen food feels soft.
- Check canned goods for signs of rust, sharp dents, or dents that are on the rimmed seals or on the side seams; such cans must not be accepted. Bulging, leaking, or crushed cans must be discarded. **Never** use home canned foods.
- Refrigerated foods must be checked for proper temperatures, (41°F or under) and should not be accepted if not at the proper temperature. The only exception is raw shell eggs, which can be received at 45°F or under.

### **Keeping food safe while in storage**

Food storage is essential to serving safe food to consumers. Keeping your food protected from contaminants whether it is stored in refrigeration, being held hot or dated properly, are all part of food storage safety. Here are some points to remember on how to keep your food safe while in storage:

- Refrigerated foods: all refrigerated foods must be held at 41°F at all times (read labeling for specific refrigeration requirements). Exception- raw shell eggs may be held at 45°F.
- Foods held at 41°F or less may be held in storage up to 7 days and foods held between 41°F- 45°F may be held in storage up to 4 days. (Refrigeration temperature of 41°F mandated by 2015).
- All frozen food must maintain their frozen state.
- All hot foods must be held at 135°F or higher.

- Refrigeration thermometers must be located in the warmest spot of the cooling unit. Thermometers must also be in a conspicuous (easily seen) location. A metal stem thermometer, that reads between 0°F - 220 °F, must be available to test the internal temperature of foods.
- Food cannot be stored in toilet rooms, garbage storage, disposal areas or under sewage lines.
- Keep food covered at all times.
- Food storage rooms must have easily cleanable floors, walls and ceilings. All food items must be stored on hard, smooth and easily cleanable surfaces. Food must also be stored at least six inches off the floor.
- Do not reuse foil, plastic, or paper products. Dry, clean cloths can only be used to cover fresh bread products.
- “First in, First out” (FIFO) is the golden rule in keeping food safe. Rotation is the key to safe food storage, display and service.
- Do not store raw meats or seafood above or with ready-to-eat foods such as fresh fruits, vegetables, cheeses or sauces.
- Date marking is required for ready-to-eat, PHF/TCS foods prepared on site and held in food service establishments for more than 24 hours.

### **Safe food preparation**

Hot foods must be held at 135°F or higher and cold foods held at 41°F or below. The range between these temperatures is considered the danger zone. Remember that bacterial growth is a function of time and temperature and PHF/TCS should never be exposed to the danger zone for more than 6 hours, including time spent in preparation, cooling and reheating. Bacteria double in number every 12 hours at 36°F, every 6 hours at 40°F, every 2 hours at 60°F and every hour at 70°F.

**a) Proper Thawing**

Potentially hazardous foods must be thawed by one of the following four methods:

- In refrigeration at or below 41°F.
- Under potable running water with a temperature of 70°F or below, with sufficient water pressure to remove food particles.
- In a microwave oven only when the food will be immediately cooked in a conventional oven or when the entire cooking process takes place in the microwave.
- Frozen product is immediately cooked in the cooking unit until completely done.

**b) Cooking Temperatures**

- Fruits and vegetables to 135°F /15 seconds.
- Eggs, fish and pork to 145°F /15 seconds.
- Meat commercially raised game, ratites, injected meats to 155 °F /15 seconds.
- Poultry and stuffed meats to 165 ° F/15seconds.
- Raw or undercooked animal foods may be served provided there is a consumer advisory in place that addresses both reminder and disclosure. (not allowed in **Highly Susceptible Population (HSP)** facilities).

**c) Hot and Cold Holding Temperatures**

- Hot holding at 135°F or above.
- Cold holding at 41°F or below, (45°F accepted for existing **clean in-place equipment** until 2015).

**Exceptions:**

- Eggs can be stored at 45°F or below.

- Rare roast beef 130°F or above (cooking and heating restrictions apply).

#### **d) Proper Cooling**

Store all leftovers in shallow pans with frequent stirring to distribute the heat to allow rapid cooling. PHF/TCS must be cooled within 2 hours from 135°F to 70°F. The food items must then be cooled to 41°F or below within an additional 4 hours (this equals a total of 6 hours to cool PHF/TCS food items). PHF/TCS foods prepared from room temperature ingredients must be cooled to 41°F or less within 4 hours. It is very important to drop the product temperature as quickly as possible; remembering that the longer a product sets out of temperature, the faster bacteria grow. Use a metal stem thermometer to ensure that foods are being held at 41°F or colder and 135°F or hotter. Remember that the internal temperature of the food is not necessarily identical to the air temperature of the refrigeration unit. Large quantities of food can raise the temperature of the refrigeration unit to such a point that adequate cooling is no longer possible. Never cool foods at room temperature.

#### **e) Safely Reheating Leftovers**

Reheat leftovers rapidly to an internal temperature of 165°F. Never use a steam table or crock-pot to reheat foods, they are to be used to hold foods at 135° F or above after cooked to the proper temperature. PHF/TCS food reheated in a microwave oven must be reheated to 165 °F for 15 seconds and let stand for 2 minutes.

#### **f) Date Marking**

All ready-to-eat (**RTE**), potentially hazardous/time and temperature controlled or safety food (**PHF/TCS**) that are prepared on-site and are held in refrigeration for more than 24

hours must be marked with either the date the food is prepared or the date the food is to be discarded. Any method of date marking is accepted. Day #1 shall be counted as the day of preparation, the removal from a container, or the day and time in which frozen food items are thawed. If prepared foods are then frozen, time will stop and start again once it is taken out of its frozen state (thawed). For instance, if a deli salad is prepared on day #1 then frozen on day #3, when it comes out of the freezer time resumes again with day #3.

Hold food in refrigeration:

- at 41° F or less and consume or discard by Day 7
  - between 41°F-45°F and consume or discard by Day 4
- \*Mandated compliance of 41° F by 2015

Food that is received prepackaged from a manufacturer will follow the date provided by the manufacturer.

### **Food Service**

Remember, during periods of food service, you should keep hot foods hot and cold foods cold. Shield all food in display cases or utilize sneeze guards on serving lines and buffets to protect the food from overhead contamination. Shielding also protects food from contamination such as nasal discharges and coughing from foodservice workers and consumers. Clean tableware must be made available for consumers.

Self-service utensils that are for public use must be stored with handles up, in a uniform fashion or prepackaged to minimize hand contact with the eating end of the utensil. Condiments such as mustard, catsup and dressings must be served in individual packages or in squeeze bottles.

### **VI) The Safe Food Handler**

The best way to prevent foodborne illness in your kitchen is to have well-trained food service workers that know and understand good hygienic practices and approved food handling practices. Cross contamination is a real problem in many food service establishments. Cross contamination occurs when microorganisms that lead to foodborne illness are transferred from one surface to another, causing the safe food to become contaminated. An example of cross contamination could be the food service worker not washing their hands after using the restroom; bacteria can potentially be transferred from their hands to the food product. Another example is when a food service worker wipes their hands on a dirty apron and then handles food. Using a cutting board to cut up raw food products and then using the same cutting board to prepare a cooked food product without **sanitizing** between uses is another good example of cross contamination.

No person may work while infected with a disease in a communicable (infectious) form. If a food service worker exhibits any of the following symptoms, that worker must be excluded from work:

- vomiting
- diarrhea
- jaundice

If a food service worker exhibits any of the following symptoms, that worker must be restricted or potentially excluded from work:

- sore throat with fever
- lesion containing pus such as a boil or infected wound that cannot be contained

Food service workers should immediately report the above symptoms to their supervisor.

Any employee diagnosed with Shigella, Hepatitis A, E. coli O157:H7, Norovirus or Salmonella (**SHENS**) should be



immediately excluded from work. **The person in charge (PIC)** is required to notify the Health Department immediately.

Food service workers must thoroughly wash their hands and the exposed portions of their arms with soap and warm water before starting work and during work as often as is necessary to keep them clean. They also must wash hands after smoking, eating, drinking, or using the restroom. Wash hands for 20 seconds with soap under warm running water at 100°F and use a disposable paper towel to dry hands. Use a barrier (paper towel, elbow, etc.) to turn off the faucet. To prevent re-contamination of your hands, open restroom doors with a paper towel. **\*\*\*Hand sanitizer must not be used in place of hand washing. \*\*\* Hand washing signs are required to be posted at all hand sinks including the restroom.**

Food service workers shall keep their fingernails clean and trimmed. They may not wear fingernail polish or artificial nails when working with exposed food unless gloves are worn. Jewelry can hide germs that cause foodborne illness and make it hard to wash hands. Jewelry can also fall into food. While preparing food, workers must remove watches, rings, bracelets and all other jewelry on their arms or hands.

The outer clothing of all food service workers shall be clean. Hair restraints are intended to keep hands out of hair and hair out of food. Hair must be effectively restrained whenever you are working around food or food preparation areas. Hairnets, hats, scarves, or similar hair coverings are required for all food service workers working in food preparation areas.

Ready to eat foods (RTE) are foods that are served without further washing or cooking. Food service workers must use utensils such as tongs, scoops, deli papers, or single-use gloves to keep from touching ready-to-eat foods. Examples of barriers include using tongs to place vegetables on a salad or using an ice scoop to get ice out of an ice bin. Single-use

gloves may be used to prepare foods that need to be handled, such as making a sandwich, or arranging food on a platter. Remember that gloves are used to protect the food from contamination, not to protect your hands from the food. Gloves must be worn if the food service worker has open cuts, sores or bandages on their hands and is working with food. **\*\*\*Gloves do not take the place of hand washing. Food service workers must wash their hands, before putting on gloves, when changing duties and after removing their gloves.**

Facilities wishing to use bare hand contact with RTE food must comply with the requirements in the 2005 FDA Food Code 3-301.11.

Food service workers are required to consume food and drinks (which have a lid and straw) in designated areas only. The designated area is to be away from food, food prep surfaces, equipment and clean utensils or other items to prevent contamination. A food service worker must wash their hands after eating, drinking and smoking.

Food service workers may not use tobacco in any form while engaged in food preparation, service, or **cleaning** equipment and utensils. Smoking is prohibited in all public buildings per the Chapter 90 Smoke Free Ordinance Louisville Metro implemented in 2007 and revised in 2008.

If an individual must operate a mechanical dishwasher alone, that employee must wash his/her hands before handling clean, sanitized dishes/utensils. An employee who busses dishes must be careful to wash his/her hands before handling food and clean dishes/utensils.

As a Certified Food Manager, it is extremely important that you educate your employees and/or co-workers to ensure that they follow safe food handling practices and proper personal hygiene.

## **VII) Person in Charge (PIC)/Demonstration of Knowledge**

At least one person with adequate food safety knowledge must be present and designated as the person in charge (PIC) during all hours of operation. An individual holding a valid Louisville Metro food manager certification (or comparable certification), would meet the requirements of the PIC and satisfy the Demonstration of Knowledge requirement. A facility, which has no critical violations during an inspection, also satisfies the demonstration of knowledge requirement. If no certified food manager is on site and critical violations are present during an inspection, the PIC must correctly answer food safety questions in order to avoid being marked in violation of the PIC requirement. By mandate of local ordinance, a certified food manager must be present during all hours of operation.

## **VIII) Cleaning and Sanitizing**

Cleaning and sanitizing are not the same. Cleaning uses soap and water to remove dirt from equipment and floor surfaces. Sanitizing uses chemicals or heat to kill microorganisms that cause foodborne illnesses. It is important to remember that surfaces may look clean but could still have microorganisms on them.

It is the responsibility of all management personnel to ensure that employees have a safe and healthy place to work. This means furnishing them with proper instruction on how to use the equipment and tools. Management personnel must also monitor the use of all furnished equipment and tools.

### **Ware Washing**

There are two methods of sanitizing: heat sanitizing and chemical sanitizing. In hot-water mechanical dishwashers, the

final rinse temperature must be at least 180°F and not exceed 194°F to sanitize. Chemical sanitizing may be accomplished mechanically or by hand. If the chemical sanitizer used is bleach (5-1/4% sodium hypochlorite), the solution strength must be between 50-100 ppm on your test strip in either a three-compartment sink or a mechanical dishwasher. Sanitizer water temperature should not exceed 75°F when using a three-compartment sink. Contact time for the dish in the sanitizer water should equal (30) thirty seconds. Quaternary ammonium (QUAT) solutions may also be used as sanitizers. The solution strength must be between 200-400 ppm, follow label instructions for proper solution strength and contact times. Test kits are required to ensure that proper solution strength is maintained for all chemical sanitizers.

### **Wiping Cloth Storage**

Keep wiping cloths in a labeled container of sanitizer. Cloths used for raw foods, RTE foods and **non-food contact surfaces** must be stored in separate buckets that are labeled. If using bleach, keep the solution between 100-200 ppm. If using QUAT, keep the solution between 200-400ppm. Check the wiping cloth sanitizer solution frequently with a test kit to ensure the proper concentration. Each time you use the wiping cloth; the concentration of the solution will change and eventually will no longer be adequate to sanitize food contact surfaces. Containers of sanitizer should not be stored directly on the floor, a tray or bus tub may be used as a barrier to ensure the bottom of the sanitizer bucket is not in contact with the floor. The sanitizer buckets should also be stored in locations where they cannot be knocked over or spilled and possibly contaminate food products. Dirty wiping cloths are often the cause of **cross contamination** and foodborne illness.

### **Food Contact Surfaces**

Clean and sanitize all food contact surfaces at a minimum of every four hours. A common cause of foodborne illness

occurs when uncooked poultry is prepared on a cutting board without sanitizing the board before preparation of the next food item. If hors d'oeuvres, cold sandwiches, or the cooked poultry are placed on the contaminated cutting board, cross contamination occurs. **CLEAN AND SANITIZE** cutting boards and food contact preparation surfaces. Use appropriate chemical test kits to test solution strength. Make sure food contact surfaces are in good repair (for example cutting boards, dicers and slicers); this will allow for ease of cleaning and proper sanitizing.

### **Equipment**

When cleaning slicers and other equipment that cannot be immersed in water (clean in-place equipment), swab or spray with sanitizer at the upper limits of the sanitizer's concentration. Follow manufacturer recommendations for clean in-place equipment such as soft serve ice cream dispensers, mixers etc.

## **IX) Vermin and Animal Control**

Insects and rodents must be controlled to minimize their presence. The presence of live vermin, such as insects and rodents, is a critical violation. Some methods that may restrict vermin activity include the inspection of shipments, the inspection of premises, sealing off all outer openings and the elimination of potential harborage and nesting sites in your facility.

Sealing off all outer openings in your facility such as water lines, electrical conduits and gas lines with caulking material will help keep rodents out. The above examples are like an interstate highway for roaches. Regularly look for signs of vermin while cleaning shelves, countertops and floors.

Some types of vermin, such as roaches and rodents, are nocturnal (night) creatures. Allowing a storeroom or kitchen

to be empty and dark for a while, and then entering quickly is a great way to check for them. Please consult your pest control operator for best results and use only food-grade pesticides.

Be sure to have facilities screened against flies. Have a screen door available if a kitchen door is to be kept open in the hot months. Air curtains or currents, if used, must be effective and fully functional. It is a good idea to remember that flies spread disease by vomiting on their food to soften it before they bite.

Live animals are not allowed in food establishments. The only exceptions to this requirement are service animals, decorative fish in aquariums and police dogs. Live or dead bait used for fishing, found in some retail food establishments, is allowed only if separated from food service areas and display areas for single service items.

## **X) Cross Connection/Backflow**

Cross connections are prohibited in a food service establishment. A cross-connection is a connection between the public drinking water supply and anything else that may affect the quality of the drinking water. Water pressure can suddenly drop because of heavy usage, a fire in the area or a broken water main. When that happens, contaminated water could be siphoned back into your plumbing system from unprotected cross connections within your facility. This is referred to as a backflow. Typical cross connections in facilities include beverage dispensers, food grinders, dishwashers and spray systems.

The most reliable form of backflow prevention is the use of an air gap. An example of a potential backflow problem due to the lack of an air gap is a spray hose attached to a faucet in which the nozzle of the spray hose has dropped into a sink filled with dirty water. However, when the spray hose is suspended above the rim of a sink with a spring system, the

space between the rim of the sink and the nozzle of the hose is the air gap. When not in use, the spring system pulls the spray nozzle up, providing the air gap.

Another way to prevent a backflow from occurring is to place a vacuum-breaker on the faucet. When there is a loss of water pressure in the line, the vacuum-breaker drops a physical barrier in the faucet preventing the backflow of dirty water from the sink into the faucet. Do not use a spray nozzle on a hose that will keep water under continuous pressure with an **atmospheric vacuum breaker**, this will cause the vacuum breaker to not work.

## **XI) Sewage and Waste Disposal**

Waste and sewage shall be disposed of according to all applicable laws and the system properly maintained. Exposed waste or sewage is not allowed in the facility. Sewage backing up into food service areas and bathroom areas is an imminent health hazard. Facilities with sewage backups or exposures should close immediately. The problem must be repaired and the affected areas thoroughly cleaned before re-opening your facility. An approved contractor should clean grease traps monthly. Check with the Metropolitan Sewer District (MSD) for grease trap guidelines.

## **XII) Highly Susceptible Populations (HSP)**

Most anyone can get sick from food that is contaminated, but certain people can get sick more easily or have illnesses that are more serious. These people are referred to as the Highly Susceptible Population.

Highly Susceptible Populations include:

- Children 6 years or younger (age 9 and under for juice restrictions)
- Adults over the age of 65
- Pregnant women

- Individuals who are immuno-compromised  
(due to cancer, medications or other conditions)

HSP facilities (hospitals, child care centers, preschools, nursing homes and adult care homes or other such facilities providing care for sick or elderly persons) have additional food safety requirements.

The following conditions apply only to HSP facilities:

- Use only pasteurized foods
- No re-use of single service condiments
- No use of unpasteurized juice, raw seed sprouts or raw/partially-cooked animal food
- No bare hand contact
- **No use of Time as a Public Health Control(TPHC)** for eggs
- No use of unpasteurized eggs

\*Exception- Raw, unpasteurized shelled eggs, which are combined immediately before cooking, served as a single meal and are cooked to an internal temperature of 145 ° F for 15 seconds may be offered at an HSP facility.

### **XIII) Consumer Advisory**

Animal products such as chicken, beef, hamburger, seafood, pork, and eggs (which are undercooked or processed to eliminate pathogens) are more likely to cause foodborne illness. It is illegal to sell raw milk in Kentucky. An advisory regarding the consumption of raw or undercooked products must be posted in a manner that is easily viewed by the public. The permit holder for the facility is responsible for informing consumers of the significantly increased risk of eating such foods by way of a **disclosure and reminder**.

- **Disclosure** -informs the consumer that a particular food contains raw or undercooked animal ingredients (Ex. Use of an asterisk by the food item



on the menu).

- **Reminder**—warns the consumer that consuming raw or undercooked foods may increase the risk of foodborne illness or, that additional information is available upon request (ex. written statement on menus, brochures, deli cases, labels, table tents, placards or other effective written means).

With regard to consumer advisories:

- Intact whole muscle is exempt.
- Undercooked or raw products may not be included on children's menus.
- Disclosure and reminder of the product must be present.

#### **XIV) Labeling**

- All food removed from its original container and moved to another container must be labeled with its contents.
- All food/ice packaging requires a source label containing ingredients, store name, address and **allergens** (if applicable).
- Meat/shellfish must contain safe handling instructions.
- All food must be labeled in English (along with a second language if desired).
- All foods containing the following allergens must be labeled as containing allergens: Tree nuts, peanuts, soy, milk, dairy, fish, egg, wheat and sulfites.

#### **XV) Plan Review**

When equipment is to be replaced, or changes made to your facility, including plumbing and applicable fixtures, all

such replacements or changes must be submitted to the Health Department for their advice and/or approval.

#### Plan Review Process

1. Obtain a plan application form from website or in person.
2. Prepare a utility site plan with details of the facility in relation to surrounding area sewers.
3. Prepare a floor plan of the facility with all equipment labeled.
4. Submit seven copies of plans including a plumbing riser diagram showing all plumbing fixtures, plumbing in the floor and hook-ups to equipment. All facilities must possess a hand sink, mop sink and three compartment sink.
5. Contact Metropolitan Sewer District (MSD) for Grease Trap approval. Sanitary sewers must be separated from kitchen waste sewers.

Grease Trap  
MSD  
540-6974

Plan submittal  
Metro Development  
574-6598

#### **XVI) Points to Remember**

Some reminders:

- Only work when you are healthy and stay home if you are sick.
- Wash your hands often using proper hand washing procedures. Wash hand before putting on and after removing gloves.
- Ready-to-eat (RTE) foods must have a barrier between the food and hands.
- Keep cold foods at or below 41° F.
- Keep hot foods at or above 135° F.
- Reheat food rapidly to 165° F/15 sec.
- Cool hot food as quickly as possible.
- Store personal food and drink items in an approved and designated area. Drink items must also have a lid and a straw.

- Keep food preparation areas and utensils clean and sanitized.
- Keep fingernails trimmed and clean.
- Properly label and store toxic chemicals.
- Wash, rinse, sanitize and air dry surfaces, utensils and equipment.
- Keep insects, rodents and other animals out of the facility.
- Check food items upon delivery for dented cans, refrigeration/freezing, expiration dates and adulterated packaging.
- Properly thaw potentially hazardous food.

Some Don'ts to remember:

- Don't wash your hands in 3 compartment sinks or mop sinks.
- Don't change tasks or jobs without washing hands.
- Don't eat or drink in undesignated areas.
- Don't cough or sneeze in or around food prep areas.
- Don't store or prep food items in the mop sink or hand sinks.
- Don't operate a facility without hot water.
- Don't block hand sinks with utensils, food or equipment.
- Don't keep a hose connected to the mop sink faucet (or any faucet) unless a backflow prevention device is attached.
- Don't forget to tell your manager if you suddenly feel sick.
- Don't forget there must always be a certified food manager and/or PIC on site when the facility is in operation.

## **XVII) Conclusion**

Food service inspections can include both minor and critical violations. Minor violations account for 1 or 2 point deductions. Critical violations account for 3, 4, or 5 point deductions and have a higher potential for causing foodborne

illness when present in food service establishments. However, the presence of numerous minor violations can also raise the potential for foodborne illness. A critical violation may result in a failed inspection.

There are some critical violations, which present such a threat to public safety that a facility should cease (stop) operation if such conditions exist. A restaurant should stop serving food to the public if the facility has no electrical power or running water, if rodents or insects immediately compromise food safety, if sewage is present in a vital area of operation (food preparation, storage, transport or service) or if sewage restricts or limits hand-washing, ware-washing or the ability to utilize the restroom. When the Health Department encounters such conditions, it will temporarily close the facility (if the facility has not already ceased operation). In addition, when a facility receives a score of 59 or below the Health Department will close the facility until critical violations have been corrected and the Health Department deems it safe to operate and re-open.

REMEMBER that the Louisville Metro Department of Public Health and Wellness is here not just to inspect and regulate, but to educate as well. Whenever serious or even minor conditions exist, or if questions of any kind arise, please call the Health Department at 574-6650 for recommendations or visit our website at:

[www.louisvilleky.gov/health/environmental/foodhygiene](http://www.louisvilleky.gov/health/environmental/foodhygiene)

It is better for a facility to recognize serious issues and close temporarily on their own accord than it is to have the Health Department shut a facility's doors. The Health Department offers these recommendations such as:

- \*Keep temperature logs for prepared or stored foods.
- \*Keep accurate logs regarding the chemical or temperature rinse levels on dishwashing machines.
- \*Call the Health Department when problems or questions



arise.

Food service facilities and the Health Department are partners and team members in the role of providing safe and enjoyable nourishment to the Louisville Metro community.

### **XVIII) Class Information**

**No Shows:** Persons who do not show up for a scheduled class must re-register and pay the fee again before rescheduling a class.

**Retests:** Persons who fail the test and need to retake the exam must pay a fee and retest within 60 days of initial test date.

**Renewals:** Certificates are valid for 3 years. The course must be completed again once your certificate expires. To ensure compliance, applications for recertification should be mailed at least 30 days before the expiration date.

**Expirations:** Registrations expire after 90 days. Applicants must pay the fee and re-register with the Health Department in order to schedule a class.

**All fees and registrations are made through the  
Department of Public Health and Wellness  
Division of Environmental Health and Protection  
P.O. Box 1704  
400 E. Gray St.  
Louisville, KY 40202  
(502) 574-6650**

### **Class Details**



**Class Location:** 3010 Taylor Springs Drive- a two-story, dark brown brick office building. It is located south of the intersection of Taylorsville Road and McMahan Blvd.

Phone # (502) 458-0841

The class schedule may vary depending on class demand. Please call the above number or visit [www.mganda.com](http://www.mganda.com) for a listing of class schedules and to register for the class. A confirmation will be received by phone or internet automated system. You will be contacted in the event the class you requested has been cancelled or is full.

If registering by phone please speak clearly and spell any unusual names. Remember to give your full name including the middle initial, the last four digits of your social security number, place of employment, date of class you are requesting and a daytime telephone number.

A picture ID such as a state issued driver's license or other state issued or job issued picture ID will be required at the time you sign in.

If you schedule a class and do not attend the class (no show), or if you cancel your class less than 24 hours before the start of your class, you will lose your fee and must re-register before you can re-schedule another class.

## **DIRECTIONS**

### **From Watterson Expressway (264)**

Take the Taylorsville Road south exit. Continue south on Taylorsville Road through the Breckenridge Lane intersection. After passing the intersection, travel through (4) traffic lights. The last light will be at McMahan Blvd. Continue through the light and watch for the first street on the right. Take Taylor Springs Drive (driveway) down past the first building (on

left). Turn right into the parking lot; follow the parking lot to the second building. Enter the building from the parking lot and follow the signs down the stairs to the assigned classroom.

**From East (Hurstbourne Lane) on Taylorsville Road heading North toward Hikes Point:**

Travel through the light at Lowe Road and past the Fire Station. Take a left at the next street (Taylor Springs Dr.), and then follow the parking lot to the second building. Enter the building from the parking lot and follow the signs down the stairs to the assigned classroom.

**From Browns Lane:**

Turn left on Taylorsville Road. Turn right at the first street (Taylorsville Springs Dr.), and then follow the parking lot to the second building.

Follow the signs down stairs to the assigned classroom.

## **XIX) Glossary**

1. **Allergens-** a normal substance that causes an acute defensive reaction in a person's immune system.
2. **Atmospheric vacuum breaker-** is a backflow prevention device used in plumbing to prevent backflow of non-potable liquids into the drinking water system.
3. **Cleaning-** The physical removal of soil from a surface.

4. **Clean in-place equipment**- equipment that is stationary and cannot be immersed in water. This type of equipment must be disassembled then cleaned and sanitized by a spray or swab method at the proper concentration.
5. **Cross-Contamination**- the transference of disease causing organisms by the improper cleaning and or sanitizing of surfaces.
6. **Foodborne illness**- A disease that is carried or transmitted by human beings to food.
7. **Food contact surface**- Any surface with which food comes into direct contact.
8. **Highly Susceptible Populations (HSP)**- include schools, daycares or similar facilities with children age 9 or less as well as hospitals and assisted living facilities and other such facilities providing care for sick or elderly persons.
9. **Hygienic practice**- any human behavior or activity that affects food safety.
10. **Non-food contact surface**- any surface with which food does not come into direct contact.
11. **Person in charge (PIC)** - any person that can demonstrate adequate food safety knowledge and is capable of organizing employees and assigning duties.
12. **Potentially hazardous food/time and temperature control for safety food (PHF/TCS)**-food that is required to be kept hot or cold to prevent the growth of bacteria. Food which consists in whole or in part of the following: milk or dairy products, egg or egg products, meat or meat products, poultry or poultry products, fish or fish products, shellfish or shellfish products, cooked rice or any other ingredient in a form capable of supporting rapid and progressive growth of illness causing bacteria.
13. **Ready-to-eat foods (RTE)** - foods that are ready for human consumption without further cooking or cleaning.



14. **Sanitizing**- The reduction in number of disease-causing organisms to a safe level.
15. **SHENS**-The five excludable illnesses that include: Shigella, Hepatitis A, E. Coli O157:H7, Norovirus and Salmonella.
16. **TCS**- the use of both time and temperature as a control for safety.
17. **TPHC**- Time as a public health control (without using the control of temperature as a means to protect food).



**-ATTENTION-**

To register for a class call: Martha Gregory & Associates (MGA) @ 458-0841 or visit the website at [www.mganda.com](http://www.mganda.com).

If registering over the phone, leave the applicant's full name including the middle initial, last four digits of their social security number, daytime phone number and class date that they would like to attend on the recorder.  
You will receive a confirmation.

Location of test:  
Martha Gregory and Associates  
3010 Taylor Springs Drive  
Louisville, KY 40220

**REMEMBER:** If you do not cancel within 24 hours prior to your scheduled class date, you will forfeit your fee and have to repay before rescheduling.

Applications with fee should be mailed to:  
Louisville Metro Department of  
Public Health and Wellness  
400 East Gray Street  
Louisville, KY 40202

Make checks payable to:  
Louisville Metro Government